

PUBLICATION NUMBER : 57134561  
PUBLICATION DATE : 19-08-82

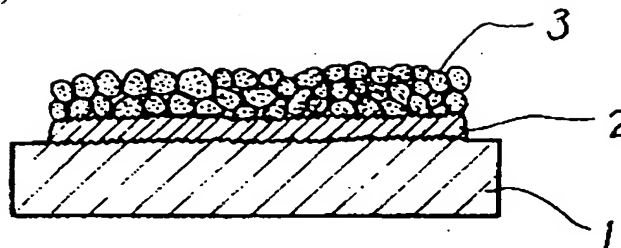
APPLICATION DATE : 13-02-81  
APPLICATION NUMBER : 56019781

APPLICANT : HITACHI HEATING APPLIANCE CO  
LTD;

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INT.CL. : C23D 3/00 A47J 37/00 C23C 7/00

TITLE : SELF-CLEANABLE COATING LAYER



ABSTRACT : PURPOSE: To improve various characteristics such as oven workability, and film adhesive strength as well as rate of self-purification by interposing a melt spraying underlying layer of a mixture of a corrosion resistant metal and ceramics between a metallic substrate of an oven and a self-cleanable ceramic layer.

CONSTITUTION: The surface of a substrate 1 of stainless steel, etc., is blasted with grit such as alumina and a mixture of  $\geq 1$  kinds of Ni-cr, Ni-Al, stainless steel and ceramic powder of  $\text{Al}_2\text{O}_3$ , etc. is deposited to 20~150 $\mu$  thickness on the surface of the substrate metal 1 by a plasma melt spraying method or the like, whereby a melt spraying underlying layer 2 is formed. Thence, mixed powders of composite ceramics of  $\text{ZrO}_2\cdot\text{SiO}_2$ , etc., and oxide having oxidation catalyst effect such as  $\text{Mn}_2\text{O}_3$  are deposited to about 80~200 $\mu$  thicknesses on the layer 2 by a melt spraying method, whereby a self-cleanable ceramic layer 3 is formed. The layer 2 forms a porous intermediate layer having high binding force, thereby improving various characteristics.

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